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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/785,117 | 02/25/2004 | Yoshiki Yoshida | 249155US2 | 1977 |

22850 7590 02/27/2008

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| EXAMINER | |
|---|---|
| AL HASHIMI, SARAH | |
| **ART UNIT** | **PAPER NUMBER** |
| 2853 | |

| NOTIFICATION DATE | DELIVERY MODE |
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| 02/27/2008 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/785,117 | YOSHIDA, YOSHIKI | |
| | Examiner | Art Unit | |
| | SARAH AL HASHIMI | 2853 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *16 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) *4-11,13-16,19,21-23,28-35,37-40,44-63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,12,17,18,20,24-27,36 and 41-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3,12,17,18,20,24-27,36,41-43** are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (US 2003/0156184).

**Suzuki** teaches:

**Claim 1**: a pixel clock generating unit that generates pixel clocks, which are used for controlling timings of projection of said laser beams, separately for each of said laser light sources, and for performing a phase change of each of said pixel clocks (fig 6); and a phase control unit that controls independently each of said pixel clocks (fig 6 #3 comparator).

**Claim 2**: said phase control unit generates control pulse signals for controlling the phase change of the pixel clocks generated by said pixel clock generation means, respectively, and outputs the control pulse signals to said pixel clock generation means, and said pixel clock generating unit performs the phase change of said pixel clocks when said control pulse signals are supplied thereto (fig 6 #3 comparator).

**Claim 3**: an operation unit that inputs setting values, which indicate an interval and a number of pulses of said control pulse signals for each of said laser light sources, wherein said phase control unit generates said control pulse signals of said pixel clocks,

respectively, based on the setting values input by said operation unit, and outputs said control pulse signals to said pixel clock generating unit (fig 6 #2 counter).

**Claim 12**: said phase control unit controls a phase of each of said pixel clocks so that the phase is changed by a time unit shorter than a period of each of said pixel clocks (para 137 “make the cycle of the clock 1 long or short according to the value of the comparison value 1”).

**Claim 17**: a pixel clock generating unit that generates pixel clocks for performing independently a modulation control of each of said laser light sources, and changes independently a phase of each of said pixel clocks of said laser light sources based on control pulse signals supplied thereto (fig 6).

**Claim 18**: a synchronization detection unit that detects the laser beams from said laser light sources at a position outside an image formation area where the electrostatic latent image is formed on said medium to be scanned in the main-scanning direction and for outputting a synchronization detection signals, which specify scan start positions of said laser beams in the main-scanning direction, respectively, wherein said pixel clock generating unit generates said pixel clocks in synchronization with said synchronization detection signals (fig 1 #2a-d).

**Claim 20**: said pixel clock generating unit controls a phase of each of said pixel clocks so that the phase is changed by a time unit shorter than a period of each of said pixel clocks (para 137 “make the cycle of the clock 1 long or short according to the value of the comparison value 1”).

**Claim 24**: a pixel clock generation step of generating pixel clocks, which are used for controlling timings of projection of said laser beams, separately for each of said laser light sources (fig 6); a phase control step of controlling independently a phase control of each of said pixel clocks (para 62 "giving phase data performing phase control of the pixel clock to each of the data area collecting the plurality of pixel clocks"); and a phase change step of performing-the phase change of each of said pixel clocks in accordance with the phase control step (fig 6).

**Claim 25**: said phase control step generates control pulse signals for controlling the phase change of the pixel clocks generated in said pixel clock generation step, respectively, and outputs the control pulse signals to said pixel clock generation step, and said pixel clock generation step performs the phase change of said pixel clocks when said control pulse signals are supplied thereto (para 35 "correction is made to displacement of scan positions of images on the plurality of media to be scanned by adjusting a phase of a pixel clock output to the semiconductor lasers of the plurality of light beam source parts").

**Claim 26**: an input step of inputting setting values, which indicate an interval and a number of pulses of said control pulse signals for each of said laser light sources, wherein said phase control step generates said control pulse signals of said pixel clocks, respectively, based on the setting values input in said input step, and outputs said-control pulse signals to said pixel clock generation step (function of counter; fig 6 #2 counter).

**Claim 27**: a synchronization detection step of detecting the laser-beams from said laser light sources at a position outside an image formation area where the electrostatic latent image is formed on said medium to be scanned in the main-scanning direction and outputting a synchronization detection signals, which specify scan start positions of said laser beams in the main-scanning direction, respectively, wherein said pixel clock generation step generates said pixel clocks in synchronization with said synchronization detection signals (fig 1 #2a-d and para 57 "optical detectors arranged at least in two locations, a start side of writing and an end side of writing, which locations are outside an effective writing area; a measuring part measuring a scan time required by the light beam deflected by the optical deflector to scan a range between the optical detectors").

**Claim 36**: said phase control step controls a phase of each of said pixel clocks so that the phase is changed by a time unit shorter than a period of each of said pixel clocks (para 137 "make the cycle of the clock 1 long or short according to the value of the comparison value 1").

**Claim 41**: pixel clock generation means for generating pixel clocks, which are used for controlling timings of projection of said laser beams, separately for each of said laser light sources, and for performing a phase change of each of said pixel clocks (fig 6); and phase control means for controlling independently each of said pixel clocks (fig 6 #3 comparator).

**Claim 42**: said phase control means generates control pulse signals for controlling the phase change of the pixel clocks generated by said pixel clock generation means, respectively, and outputs the control pulse signals to said pixel clock generation means,

and said pixel clock generation means performs the phase change of said pixel clocks when said control pulse signals are supplied thereto (fig 6).

**Claim 43**: input means for inputting setting values, which indicate an interval and a number of pulses of said control pulse signals for each of said laser light sources, wherein said phase control means generates said control pulse signals of said pixel clocks, respectively, based on the setting values input by said input means, and outputs said control pulse signals to said pixel clock generation means (fig 6 #2 counter).

***Response to Arguments***

3. Applicant's arguments filed 11/16/2007 have been fully considered but they are not persuasive.

Applicant argues that "a phase control unit that controls independently each of the said pixel clocks" is not taught in the prior art. The gist of applicant's argument appears to be that the pixel clocks can be controlled independent of each other. The example given by applicant is that second phase change data can be used to adjust a second pixel clock in a different way independent of any modification to the first pixel clock. However, this is not stated in the claims. An independent phase control unit is what is stated in the claims, and the comparator is an independent unit. It can communicate with other aspects of the clock generation circuitry but alone it controls the actual pixel clocks. This is how the claim is being interpreted. All other independent claims stand rejected because no amendments have been made to clarify this point including 17, 24 and 41. The dependent claims stand rejected based on their dependence on a rejected base claim.

## *Conclusion*

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAH AL HASHIMI whose telephone number is (571)272-7159. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272 2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either PAIR or Public PAIR. Status information for unpublished applications is available through PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SA/

/An H. Do/

Primary Examiner, Art Unit 2853